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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/730,207

12/08/2003

Huci Lin

251702-1290

2068

24504

7590

08/17/2006

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EXAMINER

MILORD, MARCEAU

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/730,207	<b>Applicant(s)</b> LIN ET AL.	
	<b>Examiner</b> Marceau Milord	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7,8,11,12 and 14 is/are rejected.
- 7) ☒ Claim(s) 2,3,6,9,10 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-5, 7-8, 11-12, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (US Patent No 6456248 B2) in view of Mou et al (US Patent No 6181916 B1).

Regarding claim 1, Ito discloses a wireless communication device (figs. 3-4), comprising: a shielding unit (2 of figs. 3-4); a first antenna unit (4 of fig. 3) transmitting a first signal between a first time and a second time (col. 3, lines 31-50; col. 4, lines 35-67); and a second antenna unit separated from the first antenna unit by the shielding unit (col. 5, lines 1-41; col. 6, lines 14-36).

However, Ito does not specifically disclose the steps of transmitting a second signal between a third time and a fourth time wherein the third time or the fourth time occurs between the first time and the second time to form a predetermined interval in which the first signal and the second signal are simultaneously transmitted.

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On the other hand, Mou et al, discloses a communication system that includes a primary unit transmitting a first signal at a first instance, receiving a second signal at a second instance and energized by a power source having a voltage level, a secondary unit transmitting a third signal at a first instance, receiving a fourth signal at a second instance, and having a first communication mode and a second communication-shut mode, and a mode-changing device enabling the primary unit to generate a mode-changing signal to be received by the secondary unit for changing the secondary unit from the first communication mode into the second communication-shut mode when the voltage level falls below a specific value (col. 1, line 59- col. 2, line 42). Furthermore, the mode-changing device includes a timer which begins to count a time period, set the reset signal to handset and enter into a stop mode (col. 3, line 29- col. 4, line 44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Mou to the communication system of Ito in order to provide a mode-changing method for a communication system.

Regarding claim 4, Ito as modified discloses a wireless communication device (figs. 3-4), wherein the first antenna unit and the second antenna unit are dipole antennas (col. 1, lines 47-62; col. 4, lines 40-54).

Regarding claim 5, Ito as modified discloses a wireless communication device (figs. 3-4), wherein the first antenna unit is a 2.4 GHz internal dipole antenna and the second antenna unit is a 5 GHz internal dipole antenna (col. 2, line 56- col. 3, line 12; col. 7, lines 45-63).

Regarding claim 7, Ito as modified discloses a wireless communication device (figs. 3-4), wherein the first antenna unit is a 2.4 GHz internal dipole antenna and the second antenna unit is a 5 GHz internal dipole antenna, and a second equivalent gain of the second antenna unit is

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approximately equal to 1.77 dBi when a first equivalent gain of the first antenna unit is approximately equal to 0.55 dBi (col. 2, line 56- col. 3, line 12; col. 5, lines 9-45).

Regarding claim 8, Ito discloses a wireless communication device (figs. 3-4), comprising: a shielding unit; a first antenna unit transmitting a first signal (col. 3, lines 31-50; col. 4, lines 35-67); a second antenna unit separated from the first antenna unit by the shielding unit, transmitting a second signal, wherein the first signal and the second signal are simultaneously transmitted (col. 5, lines 1-41; col. 6, lines 14-36).

However, Ito does not specifically disclose the features of a control unit that are electronically connected to the first antenna unit and the second antenna unit, modulating and demodulating the first signal and the second signal.

On the other hand, Mou et al, discloses a communication system that includes a primary unit transmitting a first signal at a first instance, receiving a second signal at a second instance and energized by a power source having a voltage level, a secondary unit transmitting a third signal at a first instance, receiving a fourth signal at a second instance, and having a first communication mode and a second communication-shut mode, and a mode-changing device enabling the primary unit to generate a mode-changing signal to be received by the secondary unit for changing the secondary unit from the first communication mode into the second communication-shut mode when the voltage level falls below a specific value (col. 1, line 59- col. 2, line 42). Furthermore, the mode-changing device includes a timer which begins to count a time period, set the reset signal to handset and enter into a stop mode (col. 3, line 29- col. 4, line 44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to apply the technique of Mou to the communication system of Ito in order to provide a mode-changing method for a communication system.

Regarding claim 11, Ito as modified discloses a wireless communication device (figs. 3-4), wherein the first antenna unit and the second antenna unit are dipole antennas (col. 1, lines 47-62; col. 4, lines 40-54).

Regarding claim 12, Ito as modified discloses a wireless communication device (figs. 3-4), wherein the first antenna unit is a 2.4 GHz internal dipole antenna and the second antenna unit is a 5 GHz internal dipole antenna (col. 2, line 56- col. 3, line 12; col. 7, lines 45-63).

Regarding claim 14, Ito as modified discloses a wireless communication device (figs. 3-4), wherein the first antenna unit is a 2.4 GHz internal dipole antenna and the second antenna unit is a 5 GHz internal dipole antenna, and a second equivalent gain of the second antenna unit is approximately equal to 1.77 dBi when a first equivalent gain of the first antenna unit is approximately equal to 0.55 dBi (col. 2, line 56- col. 3, line 12; col. 5, lines 9-45).

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Monma et al discloses a radio antenna with improvements in a radiation efficiency obtained by changing a directivity pattern of an antenna toward a direction not interfered by an obstacle and thus reducing radio wave interference by the obstacle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is 571-272-7853. The examiner can normally be reached on Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MARCEAU MILORD

Marceau Milord  
Primary Examiner  
Art Unit 2618

*MMilord*  
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PRIMARY EXAMINER

*8-14-06*